ADVANTECH

# PCM-9363 Intel® Atom™ N455/D525 3.5” SBC, DDR3, 24-bit LVDS, CRT or HDMI, 2 Giga LANs, Mini PCIe, 3 COMs

# Startup Manual

## Packing List

Before you begin installing your card, please make sure that the following items have been shipped:

1. 1 PCM-9363 SBC
2. 1 Startup Manual
3. 1 Utility CD
4. 1 Mini jumper pack p/n: 9689000002
5. 1 SATA cable p/n: 1700008941
6. 1 Keyboard/Mouse cable p/n: 1703060191
7. 1 Audio cable p/n: 1700018839
8. 1 COM2 cable p/n: 1701140201
9. 2 USB 2 port cables p/n: 1703100121
10. 1 SATA power cable p/n: 1703150102
11. 1 LPT cable p/n: 1700260250
12. 1 COM port cable p/n: 1700100250

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

**Note 1:** For detailed contents of PCM-9363, please refer to information on the enclosed CD-ROM (in PDF format).

**Note 2:** Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: www.adobe.com/Products/acrobat/readstep2.html (Acrobat is a trademark of Adobe)

For more information on this and other Advantech products, please visit our website at:

**http://www.advantech.com**

**http://www.advantech.com/eplatform**

For technical support and service, please visit our support website at:

**http://service.advantech.com.tw/suppot/**

This manual is for the PCM-9363 Series Rev. A1

Part No. 2006936300 1st Edition
Printed in China December 2010

## Specifications

### General

- **CPU:** Intel® Atom™ Processor N455 1.66 GHz / D525 1.8 GHz
- **System Chipset:** Intel® Atom™ N455/D525+ICH8M
- **System Memory:** DDR3 800 MHz up to 2 GB for N455, and D525 up to 4 GB
- **BIOS:** AMI 16 Mbit Flash BIOS
- **Watchdog Timer:** 255 level interval timer
- **Expansion Interface:** Mini-PCIe
- **Battery:** Lithium 3 V/220 mAH
- **SATA interface:** Two SATA ports supporting 300 MB/s
- **Keyboard/mouse connector:** Internal pin-header supports KB/mouse use
- **USB:** Six USB 2.0 compliant universal serial bus ports
- **Audio:** High Definition audio (HD), line-in, line-out, mic-in
- **GPIO:** 8-bit general purpose Input/Output

### CompactFlash® Card

- Supports one 50-pin socket for CFC type I/II

### VGA/LVDS Interface

- **Chipset:** Embedded Gen3.5+ GFX Core
- **Memory Size:** Up to 224 MB of dynamic video memory allocation
- **Resolution:**
  - CRT: Intel Atom N455 up to 1400 x 1050 (SXGA)
    Intel Atom D525 up to 2048 x 1536
  - LVDS: Single channel 24-bit LVDS up to WXGA 1366 x 768
- **LVDS LCD:**
  - Support 18 or 24-bit LVDS LCD
- **Dual Display:** CRT+LVDS

### Ethernet Interface

- LAN1 Intel® 82567V Giga LAN,
  LAN2 Intel® 82583V Giga LAN
- **Ethernet interface:** IEEE 802.3,IEEE 802.3u, IEEE 802.3x, IEEE 8023y, IEEE802.ab (100 Mbps) protocol compatible

### Mechanical and Environmental

- **Dimensions:** 146 x 102 mm (5.7” x 4”)
  Mechanical Drawings are on pages 5 and 6.
- **Power Supply Type:** AT/ATX
- **Power Requirement:** Single 12 V input

## Caution

The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.

## Specifications

- **Power Consumption:**
  - Typical in XP mode:
    N455/DDR3 1 GB : 0.74 A, 12 V
    D525/DDR3 1 GB : 0.86 A, 12 V
  - Max in HCT:
    N455/DDR3 1GB : 0.86 A, 12 V
    D525/DDR3 1GB : 1.18 A, 12 V
- **Operating Temperature:** 0 ~ 60° C (32 ~ 140° F)
- **Weight:** 0.85 kg (reference weight of total package)

## Jumpers and Connectors

The board has a number of jumpers that allow you to configure your system to suit your application.
The table below lists the function of each of the jumpers and connectors.

**Jumpers**

| Label | Function |
|---|---|
| J2 | COM2 Setting |
| J3 | AT / ATX Power SEL |
| J4 | Clear CMOS |
| J5 | Panel Voltage SEL |

## Jumpers and Connectors

**Connectors**

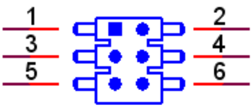
| Label | Function |
|---|---|
| CN1 | Audio |
| CN2 | SATA |
| CN3 | SATA |
| CN4 | GPIO |
| CN5 | HDD & PWR LED |
| CN6 | 12 V Power Input |
| CN8 | COM3 |
| CN10 | PS2 |
| CN11 | SMBus |
| CN12 | COM2 |
| CN13 | Inverter Power Output |
| CN14 | Internal USB |
| CN15 | Internal USB |
| CN16 | 18 or 24-bit LVDS Panel |
| CN17 | Single LAN (Optional to replace dual LAN) |
| CN18 | LAN1 |
| CN19 | LAN2 |
| CN20 | Power Switch (Low Active ) |
| CN21 | LPT |
| CN22 | HDMI (Optional) |
| CN23 | Reset |
| CN24 | External USB |
| CN25 | External USB |
| CN26 | COM1 |
| CN27 | VGA |
| CN28 | Mini PCIe lock |
| CN29 | Mini PCIe slot |
| CN30 | DDR3 SODIMM |
| CN31 | BIOS Socket |
| CN32 | CF |
| CN36 | SATA Power |

# Jumpers and Connectors

## Jumpers Settings

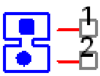
| J2 | COM2 Setting |
|---|---|
| Part Number | 1653003260 |
| Footprint | HD_3x2P_79 |
| Description | PIN HEADER 3*2P 180D(M) 2.0 mm SMD SOUARE PIN |
| Setting | Function |
| (1-2)* | RS232 |
| (3-4) | RS485 |
| (5-6) | RS422 |

*: default



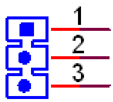

| J3 | AT / ATX Power SEL |
|---|---|
| Part Number | 1653002101 |
| Footprint | HD_2x1P_79_D |
| Description | PIN HEADER 2*1P 180D(M)SQUARE 2.0 mm DIP W/O Pb |
| Setting | Function |
| (1-2)* | AT Power SEL |
| EMPTY | ATX Power |

*: default



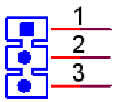

| J4 | Clear CMOS |
|---|---|
| Part Number | 1653003101 |
| Footprint | HD_3x1P_79_D |
| Description | PIN HEADER 3*1P 180D(M) 2.0 mm DIP SQUARE W/O Pb |
| Setting | Function |
| (1-2)* | Normal |
| (2-3) | Clear CMOS |

*: default




| J5 | PAN VOL SEL |
|---|---|
| Part Number | 1653003101 |
| Footprint | HD_3x1P_79_D |
| Description | PIN HEADER 3*1P 180D(M) 2.0 mm DIP SQUARE W/O Pb |
| Setting | Function |
| (1-2) | +5V |
| (2-3)* | +3V |

*: default



## PCM-9363 Jumpers and Connectors

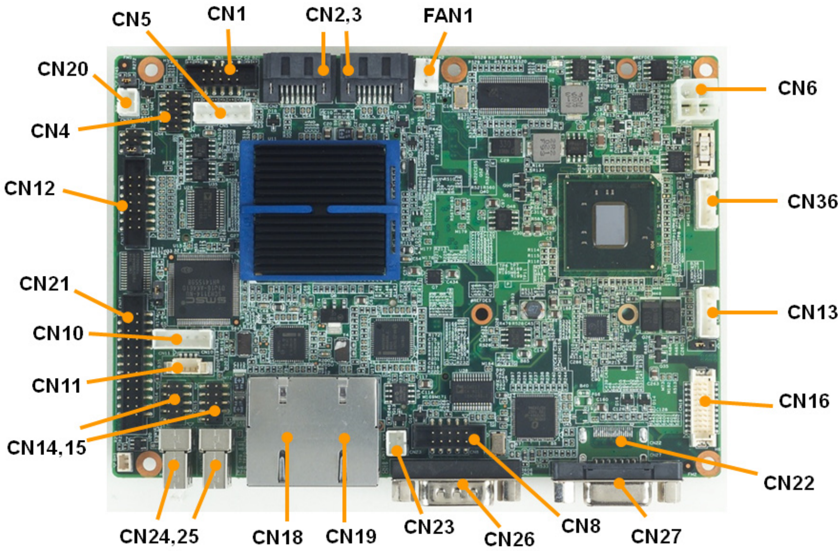



*Figure 1: PCM-9363 Jumpers and Connectors (Component Side)*

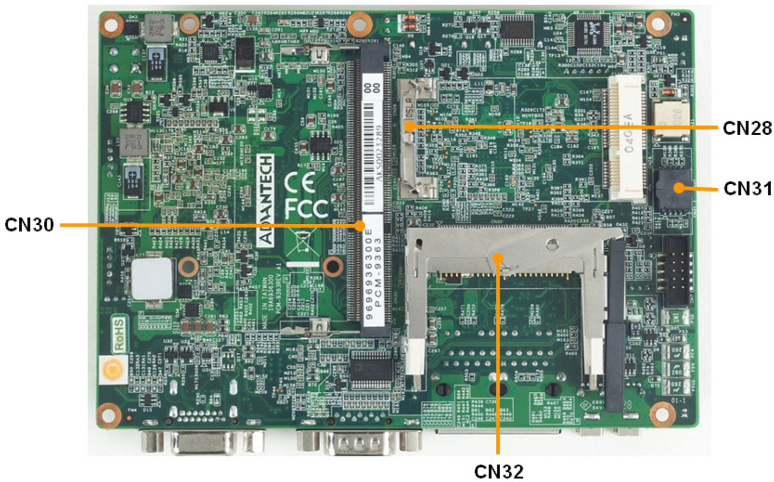



*Figure 2: PCM-9363 Jumpers and Connectors (Solder Side)*

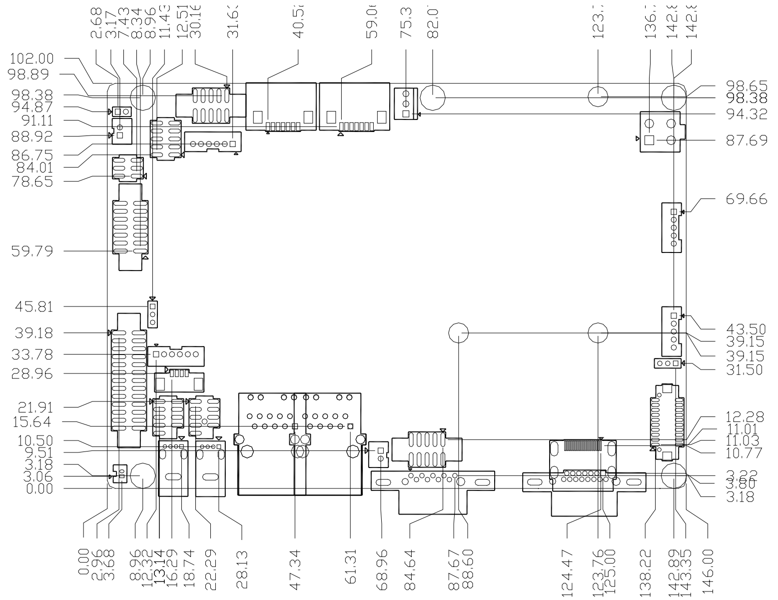



*Figure 3: PCM-9363 Mechanical Drawing (Component Side)*

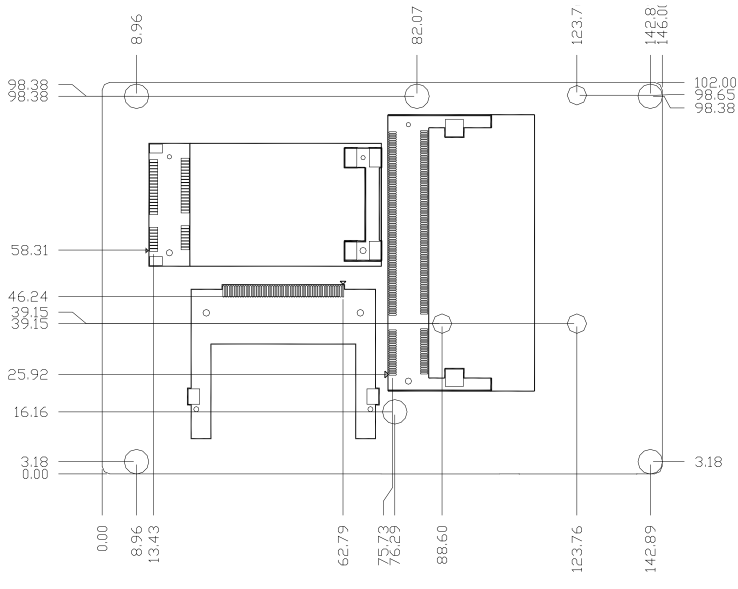



*Figure 4: PCM-9363 Mechanical Drawing (Solder Side)*

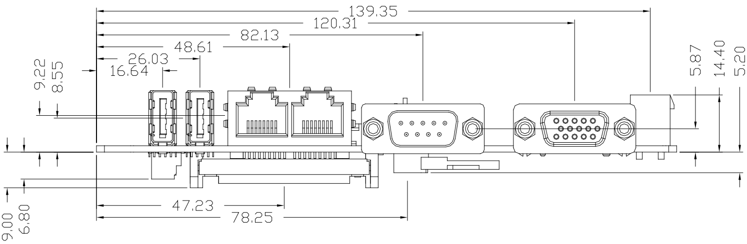



*Figure 5: PCM-9363 Mechanical Drawing (Side View)*

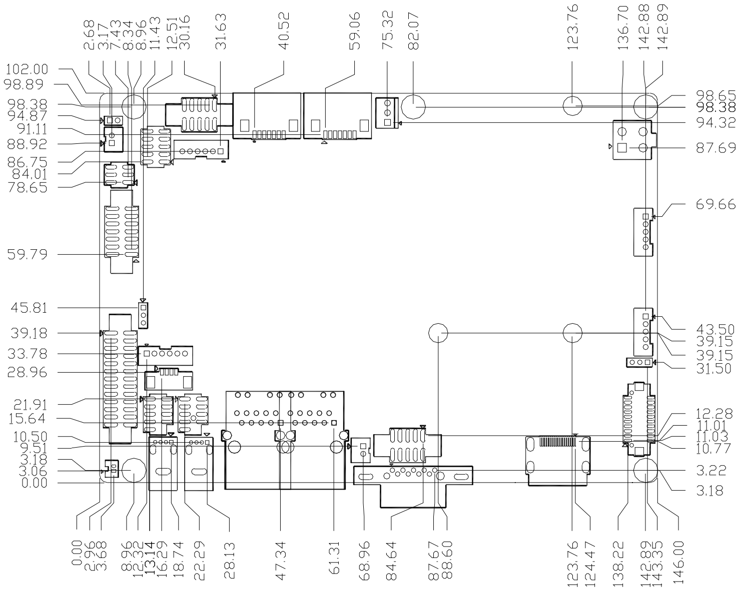



*Figure 6: PCM-9363 HDMI Mechanical Drawing (Top View)*